UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,623	01/18/2002	Kelvin Chong	2102299-991110	5779

29906 7590 03/20/2008

INGRASSIA FISHER & LORENZ, P.C.
7150 E. CAMELBACK, STE. 325
SCOTTSDALE, AZ 85251

EXAMINER	
NAHAR, QAMRUN	

ART UNIT	PAPER NUMBER
2191	

NOTIFICATION DATE	DELIVERY MODE
03/20/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@ifllaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/054,623
Filing Date: January 18, 2002
Appellant(s): CHONG ET AL.

Erin P. Madill
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 01/23/2008 appealing from the Office action mailed on 10/17/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,630,069	Flores et al.	05-1997
2002/0138617	Christfort et al.	09-2002
6,393,456	Ambler et al.	05-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 6-12, 19-22 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flores (U.S. 5,630,069) in view of Christfort (US 2002/0138617 A1).

Per Claim 1:

Flores teaches a first module adapted to allow a developer to visually design workflow describing an application, the workflow comprising a plurality of layers ("... The workflow analyst, which is the invention described herein, is a GUI application that allows a business process analyst to specify the map of business processes with its network of workflows. ... Workflows are represented graphically as elliptical loops with four phases as shown in FIGS. 1a-1f. Each workflow, and each phase within the workflow, has a starting point and an ending point. The primary workflow of the business process is displayed as a large elliptical loop to make it visually distinct as shown in FIG. 2. ..." in col. 5, lines 35-40, col. 7, lines 10-30; column 7, lines 40-45 and see FIG. 2); wherein said workflow comprises a plurality of states and a plurality of transitions ("... A workflow can be linked (and initiate) multiple workflows from

one of its phases. If all the workflows start at the same moment, the multiple workflows are said to have started in parallel. Multiple workflows can also be started serially. There are two mechanisms to indicate the serialization of workflows. As illustrated in FIG. 2, workflows serial 1 and serial 2 are sequentially workflows. The primary workflow at the beginning of the agreement phase, has a link to start workflow serial 1. Workflow serial 2 is linked from the satisfaction phase of workflow serial 1. Upon satisfaction of workflow serial 2, there is a link back to the primary workflow. ..." e.g. see in col. 3, lines 56-67); and a second module adapted to allow a developer to design views for said application ("... The workflow reporter is a GUI application that provides an interface to the transaction databases of the system. It allows the observation of the status of current transactions as well as the history and performance of past transactions. ..." in col. 5, lines 41-45).

However, Flores does not explicitly teach a multi-channel application capable of operating over a plurality of channels, comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein each layer includes states or transitions common to at least one channel of said multi-channel application or a third module adapted to allow a developer to integrate data sources within said multi-channel application.

Christfort teaches a multi-channel application capable of operating over a plurality of channels, comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein each layer includes states or transitions common to at least one channel of said multi-channel application ("... FIG. 1A also illustrates end users 130, 132, 134 that are connected to host server 110 by connections 140, 142, 144. ...

There are a number of different types of end users and connections. For example, end user 130 may be a desktop computer that is connected to host server 110 through a variety of ways, such as via the Internet, a DSL connection, or an ISDN. Also, end user 132 may be a PDA that is connected to host server 110 via a cellular modem connection. Further, end user 134 may be a mobile phone that is connected to the Internet and thereby to host server 110 via a WAP-to-HTTP gateway. ..." e.g. see in par. 66 and 95; The multi-channel application communicates with various devices using plurality of channels of communication.); and a third module adapted to allow a developer to integrate data sources within said multi-channel application ("... Techniques are provided for producing output that takes into account conditions, parameters, and characteristics associated with a service request (which are also referred to as "request-conditions"). Request-conditions may include, for example, information about the type of client that is requesting the service, such as a device type, or environmental conditions ... According to one embodiment, an application program continues to generate the same output regardless of the request-conditions. ..." e.g. see in par. 101-103).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the system disclosed by Flores to include a multi-channel application capable of operating over a plurality of channels, comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein each layer includes states or transitions common to at least one channel of said multi-channel application; and a third module adapted to allow a developer to integrate data sources within said multi-channel application using the teaching of Christfort. The modification would be obvious because one of ordinary skill in the art would be motivated to provide improved

techniques for designing applications that more effectively work with all devices (Christfort, par. 21, lines 1-3).

Per Claim 2:

The rejection of claim 1 is incorporated, and the combination of Flores and Christfort further teaches comprising an interactive development environment for allowing a developer to interact with said first, second and third modules to design said multi-channel application (e.g. see Flores, col. 14, lines 33-41; the MVC paradigm allows the interaction; and e.g. see Christfort, par. 63-65).

Per Claim 3:

The rejection of claim 2 is incorporated, and the combination of Flores and Christfort further teaches wherein said interactive development environment comprises a graphical user interface for allowing a developer to visually interact with said first, second and third module (e.g. see Flores, col. 14, lines 33-41; and e.g. see Christfort, par. 63-65).

Per Claim 4:

The rejection of claim 1 is incorporated, and Christfort further teaches wherein said system is adapted to allow a developer to design multi-modal applications (e.g. see par. 66 and 95).

Per Claim 6:

The rejection of claim 5 is incorporated, and Christfort further teaches wherein said system is adapted to allow a developer to design multi-channel applications including at least two channels selected from the group comprising voice channels, web channels, and wireless web channels (e.g. see par. 66).

Per Claim 7:

This is another version of the claimed system discussed above (claims 1 and 2), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above, including "a graphical user interface (GUI) comprising a user interface selection device and a display for displaying an interactive development environment" (e.g. see Flores, col. 5, lines 35-40, and col. 14, lines 33-41; and e.g. see Christfort, par. 63-65). Thus, accordingly, this claim is also obvious.

Per Claim 8:

The rejection of claim 7 is incorporated, and the combination of Flores and Christfort further teaches wherein said GUI is used for independently displaying and designing said plurality of layers (e.g. see Flores, col. 14, lines 33-41; and e.g. see Christfort, par. 63-65).

Per Claim 9:

The rejection of claim 8 is incorporated, and Flores further teaches wherein said GUI is adapted to independently display a root layer including states common to each of said plurality of layers, and to allow a developer to visually design said root layer ("... Workflow. Turns on

the workflow cursor which in the preferred embodiment is an oval divided into quadrants with arrowheads at the end of each quadrant as shown in FIGs. 1a-1f. When this option is selected, new workflows can be added to the map. Conditional Link. Turns on the conditional link cursor which is the preferred embodiment in a diamond shape as shown in FIG. 5. ... In a preferred embodiment, the software used to implement the workflow analyst application (Analyst) design is based on the Model-View-Controller (MVC) paradigm ... " in column 13, lines 13-20 and col. 14, lines 33-41; and see FIG. 2). Flores does not explicitly teach channels of said multi-channel application. However, Christfort teaches channels of said multi-channel application ("... The process by which the service is accessed may vary based on the type of end user. For example, a desktop computer can connect to the Internet through a dial-up line, a DSL connection, a cable modem, ... WAP phones may connect to the Internet over a wireless connection using a synchronous protocol, such as through a WAP-to-HTTP gateway ..." e.g. see in par. 95).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the system disclosed by Flores to include channels of said multi-channel application using the teaching of Christfort. The modification would be obvious because one of ordinary skill in the art would be motivated to provide improved techniques for designing applications that more effectively work with all devices (Christfort, par. 21, lines 1-3).

Per Claim 10:

The rejection of claim 9 is incorporated, and Flores further teaches wherein said GUI is further adapted to independently display a layer including states common to a layer of said application, and to allow a developer to visually design said layer ("... Workflow. Turns on the

workflow cursor which in the preferred embodiment is an oval divided into quadrants with arrowheads at the end of each quadrant as shown in FIGs. 1a-1f. When this option is selected, new workflows can be added to the map. Conditional Link. Turns on the conditional link cursor which is the preferred embodiment in a diamond shape as shown in FIG. 5. ... In a preferred embodiment, the software used to implement the workflow analyst application (Analyst) design is based on the Model-View-Controller (MVC) paradigm ... " in column 13, lines 13-20 and col. 14, lines 33-41; and see FIG. 2). Flores does not explicitly teach a voice layer or a voice channel of said multi-channel application. However, Christfort teaches a voice layer and a voice channel of said multi-channel application ("...WAP phones may connect to the Internet over a wireless connection using a synchronous protocol, such as through a WAP-to-HTTP gateway ..." e.g. see in par. 95).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the system disclosed by Flores to include a voice layer and a voice channel of said multi-channel application using the teaching of Christfort. The modification would be obvious because one of ordinary skill in the art would be motivated to provide improved techniques for designing applications that more effectively work with all devices (Christfort, par. 21, lines 1-3).

Per Claim 11:

The rejection of claim 10 is incorporated, and Flores further teaches wherein said GUI is further adapted to independently display a layer including states common to a layer of said application, and to allow a developer to visually design said layer ("... Workflow. Turns on the

workflow cursor which in the preferred embodiment is an oval divided into quadrants with arrowheads at the end of each quadrant as shown in FIGs. 1a-1f. When this option is selected, new workflows can be added to the map. Conditional Link. Turns on the conditional link cursor which is the preferred embodiment in a diamond shape as shown in FIG. 5. ... In a preferred embodiment, the software used to implement the workflow analyst application (Analyst) design is based on the Model-View-Controller (MVC) paradigm ... " in column 13, lines 13-20 and col. 14, lines 33-41; and see FIG. 2). Flores does not explicitly teach a visual layer or a visual channel of said multi-channel application. However, Christfort teaches a visual layer and a visual channel of said multi-channel application ("...a desktop computer can connect to the Internet through a dial-up line, a DSL connection, a cable modem ..." in e.g. see in par. 95).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the system disclosed by Flores to include a visual layer and a visual channel of said multi-channel application using the teaching of Christfort. The modification would be obvious because one of ordinary skill in the art would be motivated to provide improved techniques for designing applications that more effectively work with all devices (Christfort, par. 21, lines 1-3).

Per Claim 12:

The rejection of claim 11 is incorporated, and Flores further teaches wherein said GUI is further adapted to display combinations of said root and plurality of layers ("... Workflow. Turns on the workflow cursor which in the preferred embodiment is an oval divided into quadrants with arrowheads at the end of each quadrant as shown in FIGs. 1a-1f. When this

option is selected, new workflows can be added to the map. Conditional Link. Turns on the conditional link cursor which is the preferred embodiment in a diamond shape as shown in FIG. 5. ... In a preferred embodiment, the software used to implement the workflow analyst application (Analyst) design is based on the Model-View-Controller (MVC) paradigm ... " in column 13, lines 13-20 and col. 14, lines 33-41; and see FIG. 2). Flores does not explicitly teach a voice or visual layers. However, Christfort teaches a voice and visual layers ("... The process by which the service is accessed may vary based on the type of end user. For example, a desktop computer can connect to the Internet through a dial-up line, a DSL connection, a cable modem, ... WAP phones may connect to the Internet over a wireless connection using a synchronous protocol, such as through a WAP-to-HTTP gateway ..." e.g. see in par. 95).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the system disclosed by Flores to include a voice and visual layers using the teaching of Christfort. The modification would be obvious because one of ordinary skill in the art would be motivated to provide improved techniques for designing applications that more effectively work with all devices (Christfort, par. 21, lines 1-3).

Per Claim 19:

This is a method version of the claimed system discussed above, claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above, including "linking said states; and converting said application workflow into an application descriptor for delivering the application over at least one of the plurality of channels" (Flores,

e.g. see col. 3, lines 56-67; col. 5, lines 9-12 and lines 35-40; col. 7, lines 10-30; and col. 14, lines 33-41; and Christfort, see par. 66 and 95). Thus, accordingly, this claim is also obvious.

Per Claim 20:

The rejection of claim 19 is incorporated, and the combination of Flores and Christfort further teaches comprising the step of: designing a presentation of said application within said visual development environment (e.g. see Flores, col. 14, lines 33-41; and e.g. see Christfort, par. 63-65).

Per Claim 21:

The rejection of claim 20 is incorporated, and Christfort further teaches comprising the step of: internationalizing said presentation of said application within said visual development environment (e.g. see par. 95).

Per Claim 22:

The rejection of claim 21 is incorporated, and Christfort further teaches comprising the step of: integrating data sources into said application by use of said visual development environment (e.g. see par. 101-103).

Per Claim 25:

The rejection of claim 19 is incorporated, and Flores further teaches comprising the step of: componentizing a plurality of said states and transitions into a reusable sub-model within said

visual development environment (e.g. see "definitions database contains **records** that define each type of business process and workflow in the system. These **records** are used by the workflow updater and workflow processor to determine ***new workflow states and available actions***." (emphasis added) in col. 4, lines 53-57; the records are reusable sub-model).

Per Claim 26:

The rejection of claim 21 is incorporated, and Flores further teaches comprising the step of: packaging said application workflow into a reusable component within said visual development environment (e.g. see "definitions database contains **records** that define each type of business process and workflow in the system. These **records** are used by the workflow updater and workflow processor to determine new workflow states and available actions." (emphasis added) in col. 4, lines 53-57; the records are reusable component).

Claims 13-14 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flores (U.S. 5,630,069) in view of Christfort (US 2002/0138617 A1), and further in view of Ambler (U.S. 6,393,456).

Per Claim 13:

Flores teaches a graphical user interface adapted to allow a user to visually build a single workflow for an application (e.g. see col. 5, lines 9-12 and lines 35-40; and col. 7, lines 10-30); wherein said single workflow comprises a plurality of states and a plurality of transitions (e.g. see col. 3, lines 56-67). However, Flores does not explicitly teach a multi-channel application

capable of operating over a plurality of channels, comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein each layer includes states or transitions common to at least one channel of said multi-channel application or a module for converting said visually built workflow into a markup language.

Christfort teaches a multi-channel application capable of operating over a plurality of channels, comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application (e.g. see par. 66 and 95; The multi-channel application communicates with various devices using plurality of channels of communication.), wherein each layer includes states or transitions common to at least one channel of said multi-channel application (e.g. see par. 66 and 95).

Ambler teaches a module for converting said visually built workflow into a markup language ("The workflow specifications are proposed to be written in extensible Mark-up Language (XML), which provides a robust tool for specifying workflows." in column 8, lines 43-46; The visually built workflow is represented by workflow specifications, which is converted into XML.).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the system disclosed by Flores to include a multi-channel application capable of operating over a plurality of channels, comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein each layer includes states or transitions common to at least one channel of said multi-channel application or a module for converting said visually built workflow into a markup language using the teaching of Christfort and Ambler. The modification would be obvious

because one of ordinary skill in the art would be motivated to provide improved techniques for designing applications that more effectively work with all devices (Christfort, par. 21, lines 1-3) and use a standard language such as XML that allows greater flexibility.

Per Claim 14:

The rejection of claim 13 is incorporated, and Ambler further teaches wherein said markup language comprises an XML-based language (e.g. see col. 8, lines 43-46).

Per Claim 16:

The rejection of claim 13 is incorporated, and the combination of Flores and Christfort further teaches wherein said graphical user interface is adapted to allow a user to visually build a single workflow for a multi-channel application capable of operating in a plurality of modes (Flores, e.g. see col. 3, lines 56-67; and Christfort, e.g. see par. 66 and 95).

Per Claim 17:

The rejection of claim 13 is incorporated, and the combination of Flores and Christfort further teaches a second graphical user interface adapted to allow a developer to build views of multi-channel application (Flores, e.g. see col. 5, lines 41-45; and Christfort, e.g. see par. 66 and 95); and Ambler further teaches a second module adapted to convert said built views into a markup language (e.g. see col. 12, lines 49-59).

Per Claim 18:

The rejection of claim 17 is incorporated, and Ambler further teaches wherein said markup language comprises an XML-based language (e.g. see col. 8, lines 43-46).

(10) Response to Argument

Appellant has argued

1) There is no motivation to combine Flores and Christfort produce a "workflow describing a multi-channel application capable of operating over a plurality of channels," as required by claim 1.

Examiner's Response

1) Examiner disagrees with Appellant's assertion that there is no motivation to combine Flores and Christfort to produce a "workflow describing a multi-channel application capable of operating over a plurality of channels," as required by claim 1.

Flores teaches workflow ("... The workflow analyst, which is the invention described herein, is a GUI application that allows a business process analyst to specify the map of business processes with its network of workflows. ..." in col. 5, lines 35-40 and col. 7, lines 10-30). That is, Flores is relied upon for the limitation "workflow", while Christfort is relied upon for the limitation "a multi-channel application capable of operating over a plurality of channels". Christfort teaches a multi-channel application capable of operating over a plurality of channels ("... FIG. 1A also illustrates end users 130, 132, 134 that are connected to host server 110 by connections 140, 142, 144. ... There are a number of different types of end users and connections. For example, end user 130 may be a desktop computer that is connected to host

server 110 through a variety of ways, such as via the Internet, a DSL connection, or an ISDN. Also, end user 132 may be a PDA that is connected to host server 110 via a cellular modem connection. Further, end user 134 may be a mobile phone that is connected to the Internet and thereby to host server 110 via a WAP-to-HTTP gateway. ..." e.g. see in par. 66 and 95; The multi-channel application communicates with various devices using plurality of channels of communication.).

In response to applicant's argument that there is no suggestion or motivation to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the system disclosed by Flores to include a multi-channel application capable of operating over a plurality of channels, comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein each layer includes states or transitions common to at least one channel of said multi-channel application; and a third module adapted to allow a developer to integrate data sources within said multi-channel application using the teaching of Christfort. The modification would be obvious because one of ordinary skill in the art would be motivated to provide improved techniques for designing applications that more effectively work with all devices (Christfort, par. 21, lines 1-3).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Furthermore, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In addition, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., IDE and GUI) are not recited in the rejected claim 1. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Appellant has argued

2) The cited references also fail to teach or suggest that the workflow comprises "a plurality of layers," as required by claim 1.

Examiner's Response

2) Examiner disagrees with Appellant's assertion that the cited references also fail to teach or suggest that the workflow comprises "a plurality of layers," as required by claim 1.

Flores teaches that the workflow comprising a plurality of layers ("... Workflows are represented graphically as elliptical loops with four phases as shown in FIGS. 1a-1f. Each workflow, and each phase within the workflow, has a starting point and an ending point. The primary workflow of the business process is displayed as a large elliptical loop to make it visually distinct as shown in FIG. 2. ..." in column 7, lines 40-45 and see FIG. 2).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., IDE and layers can be represented visually on the interaction workflow diagram ... using different colors. Layers are functional as well--if a layer is hidden during deployment, its states is not deployed to the engine 132 and are unable to be used by end users.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Appellant has argued

3) The cited references also fail to teach or suggest that "each of said layers corresponds to at least one channel of said multi-channel application, wherein said workflow comprises a plurality of states and a plurality of transitions, wherein each layer includes states and transitions common to at least one channel of said multi-channel application," as required by claim 1.

Examiner's Response

3) Examiner disagrees with Appellant's assertion that the cited references also fail to teach or suggest that "each of said layers corresponds to at least one channel of said multi-channel application, wherein said workflow comprises a plurality of states and a plurality of transitions, wherein each layer includes states and transitions common to at least one channel of said multi-channel application," as required by claim 1.

Flores teaches that the workflow comprising a plurality of layers ("... Workflows are represented graphically as elliptical loops with four phases as shown in FIGS. 1a-1f. Each workflow, and each phase within the workflow, has a starting point and an ending point. The primary workflow of the business process is displayed as a large elliptical loop to make it visually distinct as shown in FIG. 2. ..." in column 7, lines 40-45 and see FIG. 2); wherein said workflow comprises a plurality of states and a plurality of transitions ("... A workflow can be linked (and initiate) multiple workflows from one of its phases. If all the workflows start at the same moment, the multiple workflows are said to have started in parallel. Multiple workflows can also be started serially. There are two mechanisms to indicate the serialization of workflows. As illustrated in FIG. 2, workflows serial 1 and serial 2 are sequentially workflows. The primary workflow at the beginning of the agreement phase, has a link to start workflow serial 1. Workflow serial 2 is linked from the satisfaction phase of workflow serial 1. Upon satisfaction of workflow serial 2, there is a link back to the primary workflow. ..." e.g. see in col. 3, lines 56-67). However, Flores does not explicitly teach wherein each of said layers corresponds to at least one channel of said multi-channel application or wherein each layer includes states or transitions common to at least one channel of said multi-channel application. That is, Christfort

is relied upon for the limitation "wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein each layer includes states or transitions common to at least one channel of said multi-channel application". Christfort teaches a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein each layer includes states or transitions common to at least one channel of said multi-channel application ("... FIG. 1A also illustrates end users 130, 132, 134 that are connected to host server 110 by connections 140, 142, 144. ... There are a number of different types of end users and connections. For example, end user 130 may be a desktop computer that is connected to host server 110 through a variety of ways, such as via the Internet, a DSL connection, or an ISDN. Also, end user 132 may be a PDA that is connected to host server 110 via a cellular modem connection. Further, end user 134 may be a mobile phone that is connected to the Internet and thereby to host server 110 via a WAP-to-HTTP gateway. ..." e.g. see in par. 66 and 95; The multi-channel application communicates with various devices using plurality of channels of communication.).

In addition, see the rejection above in paragraph 9 for rejection to claims 1-4 and 6.

Appellant has argued

4) For at least the reasons stated above with respect to claim 1, Appellants submit that the cited references fails to teach or suggest an system for "visually designing workflow describing a multi-channel application capable of operating over a plurality of channels, said environment being adapted to allow a developer to independently design said workflow in a plurality of

layers," or that "each layer includes states and transitions common to at least one channel of said multi-channel application," as recited in claim 7.

Accordingly, for at least the foregoing reasons, Appellants submit that claim 7, and its dependent claims 8-12, are patentable over the cited references. In addition, Appellants submit that many of the dependent claims are separately patentable since they include limitations not taught or suggested by the cited references.

Examiner's Response

4) The Examiner has already addressed the Appellant's arguments regarding claim 1 in the Examiner's Response (1) thru (3) above. See the Examiner's Response (1) thru (3) above. In addition, see the rejection above in paragraph 9 for rejection to claims 7-12.

Appellant has argued

5) Dependent Claim 9

For example, the Office Action also rejects dependent claims 9- 12 based on paragraphs [0066] and [0095] of Christfort which are reproduced above. Dependent claim 9 requires that the "GUI is adapted to independently display a root layer including states common to each of said channels of said multi-channel application, and to allow a developer to visually design said root layer." Appellants submit that the cited sections of Flores and Christfort fail to teach at least the above-underlined recitations of claim 9. Accordingly, Appellants submit that dependent claim 9 is also separately patentable.

Examiner's Response

5) Examiner disagrees with Appellant's assertion that the cited references fail to teach that the GUI is adapted to independently display a root layer including states common to each of said channels of said multi-channel application, and to allow a developer to visually design said root layer.

Flores further teaches wherein said GUI is adapted to independently display a root layer including states common to each of said plurality of layers, and to allow a developer to visually design said root layer ("... Workflow. Turns on the workflow cursor which in the preferred embodiment is an oval divided into quadrants with arrowheads at the end of each quadrant as shown in FIGs. 1a-1f. When this option is selected, new workflows can be added to the map. Conditional Link. Turns on the conditional link cursor which is the preferred embodiment in a diamond shape as shown in FIG. 5. ... In a preferred embodiment, the software used to implement the workflow analyst application (Analyst) design is based on the Model-View-Controller (MVC) paradigm ... " in column 13, lines 13-20 and col. 14, lines 33-41; and see FIG. 2). Flores does not explicitly teach channels of said multi-channel application. However, Christfort teaches channels of said multi-channel application ("... The process by which the service is accessed may vary based on the type of end user. For example, a desktop computer can connect to the Internet through a dial-up line, a DSL connection, a cable modem, ... WAP phones may connect to the Internet over a wireless connection using a synchronous protocol, such as through a WAP-to-HTTP gateway ..." e.g. see in par. 95).

Appellant has argued

6) Dependent Claim 10

Dependent claim 10 requires that the "GUI is further adapted to independently display a voice layer including states common to a voice channel of said multi-channel application, and to allow a developer to visually design said voice layer." Appellants submit that the cited sections of Flores and Christfort fail to teach at least the above-underlined recitations of claim 10. Accordingly, Appellants submit that dependent claim 10 is also separately patentable.

Examiner's Response

6) Examiner disagrees with Appellant's assertion that the cited references fail to teach that the GUI is further adapted to independently display a voice layer including states common to a voice channel of said multi-channel application, and to allow a developer to visually design said voice layer.

Flores further teaches wherein said GUI is further adapted to independently display a layer including states common to a layer of said application, and to allow a developer to visually design said layer ("... Workflow. Turns on the workflow cursor which in the preferred embodiment is an oval divided into quadrants with arrowheads at the end of each quadrant as shown in FIGs. 1a-1f. When this option is selected, new workflows can be added to the map. Conditional Link. Turns on the conditional link cursor which is the preferred embodiment in a diamond shape as shown in FIG. 5. ... In a preferred embodiment, the software used to implement the workflow analyst application (Analyst) design is based on the Model-View-Controller (MVC) paradigm ... " in column 13, lines 13-20 and col. 14, lines 33-41; and see FIG. 2). Flores does not explicitly teach a voice layer or a voice channel of said multi-channel

application. However, Christfort teaches a voice layer and a voice channel of said multi-channel application ("...WAP phones may connect to the Internet over a wireless connection using a synchronous protocol, such as through a WAP-to-HTTP gateway ..." e.g. see in par. 95).

Appellant has argued

7) Dependent Claim 11

Dependent claim 11 requires that the "GUI is further adapted to independently display a visual layer including states common to a visual channel of said multi-channel application, and to allow a developer to visually design said visual layer." Appellants submit that the cited sections of Flores and Christfort fail to teach at least the above-underlined recitations of claim 11. Accordingly, Appellants submit that dependent claim 11 is also separately patentable.

Examiner's Response

7) Examiner disagrees with Appellant's assertion that the cited references fail to teach that the GUI is further adapted to independently display a visual layer including states common to a visual channel of said multi-channel application, and to allow a developer to visually design said visual layer.

Flores further teaches wherein said GUI is further adapted to independently display a layer including states common to a layer of said application, and to allow a developer to visually design said layer ("... Workflow. Turns on the workflow cursor which in the preferred embodiment is an oval divided into quadrants with arrowheads at the end of each quadrant as shown in FIGs. 1a-1f. When this option is selected, new workflows can be added to the map.

Conditional Link. Turns on the conditional link cursor which is the preferred embodiment in a diamond shape as shown in FIG. 5. ... In a preferred embodiment, the software used to implement the workflow analyst application (Analyst) design is based on the Model-View-Controller (MVC) paradigm ... " in column 13, lines 13-20 and col. 14, lines 33-41; and see FIG. 2). Flores does not explicitly teach a visual layer or a visual channel of said multi-channel application. However, Christfort teaches a visual layer and a visual channel of said multi-channel application ("...a desktop computer can connect to the Internet through a dial-up line, a DSL connection, a cable modem ..." in e.g. see in par. 95).

Appellant has argued

8) Dependent Claim 12

Dependent claim 12 requires that the "GUI is further adapted to display combinations of said root, voice and visual layers." Appellants submit that the cited sections of Flores and Christfort fail to teach at least the above-underlined recitations of claim 12. Accordingly, Appellants submit that dependent claim 12 is also separately patentable.

Examiner's Response

8) Examiner disagrees with Appellant's assertion that the cited references fail to teach that the GUI is further adapted to display combinations of said root, voice and visual layers.

Flores further teaches wherein said GUI is further adapted to display combinations of said root and plurality of layers ("... Workflow. Turns on the workflow cursor which in the preferred embodiment is an oval divided into quadrants with arrowheads at the end of each

quadrant as shown in FIGs. 1a-1f. When this option is selected, new workflows can be added to the map. Conditional Link. Turns on the conditional link cursor which is the preferred embodiment in a diamond shape as shown in FIG. 5. ... In a preferred embodiment, the software used to implement the workflow analyst application (Analyst) design is based on the Model-View-Controller (MVC) paradigm ... " in column 13, lines 13-20 and col. 14, lines 33-41; and see FIG. 2). Flores does not explicitly teach a voice or visual layers. However, Christfort teaches a voice and visual layers ("... The process by which the service is accessed may vary based on the type of end user. For example, a desktop computer can connect to the Internet through a dial-up line, a DSL connection, a cable modem, ... WAP phones may connect to the Internet over a wireless connection using a synchronous protocol, such as through a WAP-to-HTTP gateway ..." e.g. see in par. 95).

Appellant has argued

9) Independent claim 19 and Dependent Claims 20-23 and 25-26

For at least the reasons stated above with respect to claim 1, Appellants submit that the cited references fail to teach, for example, that the "designing an application workflow within said visual development environment in a plurality of layers, said application workflow comprising a plurality of states and a plurality of transitions, wherein said application workflow describes a multi-channel application capable of operating over a plurality of channels, wherein the application workflow comprises a plurality of layers, wherein each layer includes states and transitions common to at least one channel of said multi-channel application," as required by claim 19.

Appellants further submit that the cited references fail to teach, for example, "converting said application workflow into an application descriptor for delivering the application over at least one of the plurality of channels," as required by claim 19. Appellants submit there is no teaching or suggestion of this recitation in the cited references. Appellants respectfully request that the Examiner provide a citation in the references which teaches this recitation.

Accordingly, for at least the foregoing reasons, Appellants submit that claim 19, and its dependent claims 20-23 and 25-26, are patentable over the cited references.

Examiner's Response

9) The Examiner has already addressed the Appellant's arguments regarding claim 1 in the Examiner's Response (1) thru (3) above. See the Examiner's Response (1) thru (3) above.

Furthermore, Flores further teaches converting said application workflow into an application descriptor for delivering the application over at least one of the plurality of layers ("... A workflow can be linked (and initiate) multiple workflows from one of its phases. If all the workflows start at the same moment, the multiple workflows are said to have started in parallel. Multiple workflows can also be started serially. There are two mechanisms to indicate the serialization of workflows. As illustrated in FIG. 2, workflows serial 1 and serial 2 are sequentially workflows. The primary workflow at the beginning of the agreement phase, has a link to start workflow serial 1. Workflow serial 2 is linked from the satisfaction phase of workflow serial 1. Upon satisfaction of workflow serial 2, there is a link back to the primary workflow. ... The workflow analyst, which is the invention described herein, is a GUI application that allows a business process analyst to specify the map of business processes with its network

of workflows. Its output is readable by the application builder which will update the definitions database of the server. ..." e.g. see in col. 3, lines 56-67; col. 5, lines 9-12 and lines 35-40; col. 7, lines 10-30; and col. 14, lines 33-41). Flores does not explicitly teach a plurality of channels. However, Christfort teaches a plurality of channels ("... The process by which the service is accessed may vary based on the type of end user. For example, a desktop computer can connect to the Internet through a dial-up line, a DSL connection, a cable modem, ... WAP phones may connect to the Internet over a wireless connection using a synchronous protocol, such as through a WAP-to-HTTP gateway ..." e.g. see in par. 95).

In addition, see the rejection above in paragraph 9 for rejection to claims 19-23 and 25-26.

Appellant has argued

10) As discussed above, Flores and Christfort fail to disclose at least one feature of independent Claims 1, 7, and 19. For analogous reasons, Appellants submit that Flores and Christfort also fail to disclose at least one feature of independent Claims 13, and further submit Ambler also does not make up for the previously noted deficiencies of Flores and Christfort. For example, Appellants submit that Flores, Christfort and Ambler all fail to teach or suggest "a graphical user interface adapted to allow a user to visually build a single workflow describing a multi-channel application capable of operating over a plurality of channels, the workflow comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein said single workflow comprises a plurality of states

and a plurality of transitions, wherein each layer includes states and transitions common to at least one channel of said multi-channel application," as required by Claim 13.

For at least the foregoing reason, Appellants submit that the cited references fail to teach or suggest these recitations of claim 13. Accordingly, for at least the foregoing reasons, Appellants submit that claim 13, and its dependent claims 14 and 16-18, are patentable over the cited references.

Examiner's Response

10) The Examiner has already addressed the Appellant's arguments regarding claim 1 in the Examiner's Response (1) thru (3) above. See the Examiner's Response (1) thru (3) above.

Furthermore, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In addition, see the rejection above in paragraph 9 for rejection to claims 13-14 and 16-18.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Qamrun Nahar

March 10, 2008

Conferees:

Wei Y. Zhen

SPE 2191

Tuan Q. Dam

SPE 2192